

## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

In the Official Action, the Examiner rejects claim 1 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements. Specifically, the Examiner argues that the term "end effector" is not adequately disclosed in the specification and it is not clear what elements would constitute an end effector. Applicants respectfully disagree and traverse the Examiner's rejection of claim 1 under 35 U.S.C. § 112, second paragraph, for at least the reasons set forth below.

The term "end effector" has a meaning that is known to those of ordinary skill in the surgical instrumentation art. An end effector is a generic term for different types of instrument tips that perform different functions, such as scissors, graspers, needles, knives and the like. On page 1 of the specification, the term end effectors is described as including a blade and clamp element. Thus, Applicants respectfully submit that the meaning of the term "end effector" is known to those of ordinary skill in the art of surgical instrumentation. Furthermore, the Examiner argues that it is not clear what elements would constitute an end effector. However, Applicants respectfully submit that the elements which comprise the end effector are recited in the claim itself, namely, "an end effector including blade and clamp means for the engagement of tissues located therebetween." Therefore, Applicants further respectfully submit that the elements which comprise the end effector are recited in the claim itself.

In view of the above, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Official Action, the Examiner rejects claims 9 and 10 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. Specifically, the Examiner argues that the term "stub shaft" is not recited in the specification or depicted in the drawings. In response, claims 9 and 10 have been amended to remove the term "stub shaft." Accordingly, Applicants respectfully request that the rejection of claims 9 and 10 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Official Action, the Examiner rejects claim 12 under 35 U.S.C. § 112, second paragraph, because the limitation "said cam means" has insufficient antecedent basis in the claim. In response, claim 12 has been amended to remove the term "said cam means." Accordingly, Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Official Action, the Examiner rejects claims 1, 5, 7-12, and 14 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,024,750 to Mastri et al., (hereinafter "Mastri"). Additionally, the Examiner rejects claims 1-5 and 7 under 35 U.S.C. § 102(a) and/or e) as being anticipated by U.S. Patent No. 6,193,709 to Miyawaki et al., (hereinafter "Miyawaki"). Lastly, the Examiner rejects claims 6, 13, and 15 under 35 U.S.C. § 103(a) as being unpatentable over Mastri.

In response, Applicants respectfully traverse the Examiner's rejections under 35 U.S.C. §§ 102(a), 102(b), 102(e), and 103(a) for at least the reasons set forth below.

Mastri discloses an ultrasonic instrument in which a blade (58) is disposed at an end of a shaft (vibration coupler 50). The vibration coupler is disposed in a lumen of an inner tube (46). A clamp jaw (60) is rotatably disposed at an end of the inner tube by camming members and slots (72, 74). The inner tube is slidingly disposed within a lumen of

an outer tube 42. Relative movement between the inner and outer tubes causes the clamp jaw to open and close relative to the blade.

Miyawaki similarly discloses a blade 251a that is disposed at an end of a shaft (vibration transmitting member 251). The shaft is disposed in a lumen of an outer sheath (231) and a first lumen (270b) of a holding member (270) connected to an end of the outer sheath. A clamping member (open-close member 275) is rotatably attached to the holding member via a pivot pin (273) and is actuated by an operating rod (252) that is disposed in the lumen of the outer sheath and in a second lumen (270c) of the holding member. Actuation of the clamp member between the open and closed positions is accomplished by pushing and pulling the operating rod (column 17, lines 10-12).

In contrast to the ultrasonic instruments of both Mastri and Miyawaki, independent claim 1 recites in part:

"an end effector including blade and clamp means for the engagement of tissues located therebetween;  
an elongated shaft element having said end effector arranged at a first end thereof"

Thus, claim 1 recites an end effector as including a blade and a clamp means and that the end effector is arranged at a first end of the elongated shaft. Applicants respectfully submit that neither Mastri nor Miyawaki disclose or suggest such features. As discussed above, Mastri teaches a blade arranged on the vibration coupler and a clamp jaw arranged on an end of an inner tube. Similarly, Miyawaki teaches a blade arranged at an end of the vibration transmitting member and a clamping member arranged at an end of the outer sheath via a holding member.

Furthermore, independent claim 1 (as amended) recites in part:

"said tubular member biasing said clamp means so as to cause said blade and clamp means to selectively open and close relative to each other."

Applicants respectfully submit that Miyawaki does not disclose or suggest such features. As discussed above, Miyawaki teaches the selective opening and closing of the clamping member is accomplished, not by the tubular member biasing the clamp means, but by pushing and pulling on the control rod.

With regard to the rejections of claims 1-5, 7-12 and 14, under 35 U.S.C. § 102, an ultrasonic surgical instrument having the features described above and recited in independent claim 1, is nowhere disclosed in either Mastri or Miyawaki. Since it has been decided that "anticipation requires the presence in a single prior art reference, disclosure of each and every element of the claimed invention, arranged as in the claim,"<sup>1</sup> independent claim 1 is not anticipated by either Mastri or Miyawaki. Accordingly, independent claim 1 patentably distinguishes over both Mastri and Miyawaki and is allowable. Claims 2-5, 7-12 and 14 being dependent upon claim 1 are thus at least allowable therewith. Consequently, the Examiner is respectfully requested to withdraw the rejections of claims 1-5, 7-12 and 14, under 35 U.S.C. § 102.

With regard to claims 6, 13, and 15, since independent claim 1 patentably distinguishes over the prior art and are allowable, claims 6, 13, and 15 are at least allowable therewith because they depend from an allowable base claim.

In other words, Independent claim 1 is not rendered obvious by the cited reference because the Mastri patent, whether taken alone or in combination with the knowledge of those of ordinary skill in the art, does not teach or suggest an ultrasonic surgical

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<sup>1</sup> Lindeman Maschinenfabrik GMBH v. American Hoist and Derrick Company, 730 F.2d 1452, 1458; 221 U.S.P.Q. 481, 485 (Fed. Cir., 1984).

instrument having the features described above. Accordingly, claim 1 patentably distinguishes over the prior art and is allowable. Claims 6, 13, and 15, being dependent upon claim 1 are thus allowable therewith. Consequently, the Examiner is respectfully requested to withdraw the rejection of claims 6, 13, and 15 under 35 U.S.C. § 103(a).

Additionally, Applicants respectfully submit that at least claim 2 patentably distinguishes over the cited references independently of its base claim (1). At the top of page 6 of the Official Action, the Examiner argues that the features of claim 2 are shown in Miyawaki. Applicants respectfully disagree. Figures 13 and 21 and column 20 of Miyawaki clearly disclose that the control rod (252) moves and the vibration transmitting member (251) remains stationary. As discussed above, the control rod (252) is pushed and pulled to open and close the clamp member. Claim 2 has been amended to recite that the elongated shaft element transmits ultrasonic vibrations to the end effector. New independent claim 16 has also been added which merges the features of claims 1 and 2.

Furthermore, new claim 17 has been added to further define the patentable invention. New claim 17 is fully supported in the original disclosure. Thus, no new matter has been entered into the disclosure by way of new claim 17. New claim 17 recites in part:

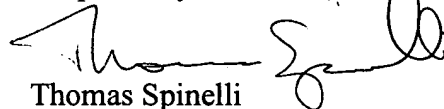
"an elongated shaft element having said end effector arranged at a first end thereof, the clamp means being pivotally attached to the first end of the elongated shaft element"

As discussed above, in the instrument of Mastri, the clamp jaw is pivotally disposed on the inner tube 46. Furthermore, in the instrument of Miyawaki, the clamp member is pivotally disposed on the outer tube via the holding member (270). Thus, Applicants respectfully submit that new claim 17 patentably distinguishes over the cited references and is allowable.

Lastly, claims 1 and 11 have been amended to improve their form and readability. Specifically, --and-- has been inserted between the penultimate and last subparagraphs of claim 1 and "selective" on the last line of claim 1 has been changed to --selectively--. Claim 11 has been amended to clarify that the blade is detachably fastened to the elongated shaft element. No new matter has been entered by way of these amendments to the specification.

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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